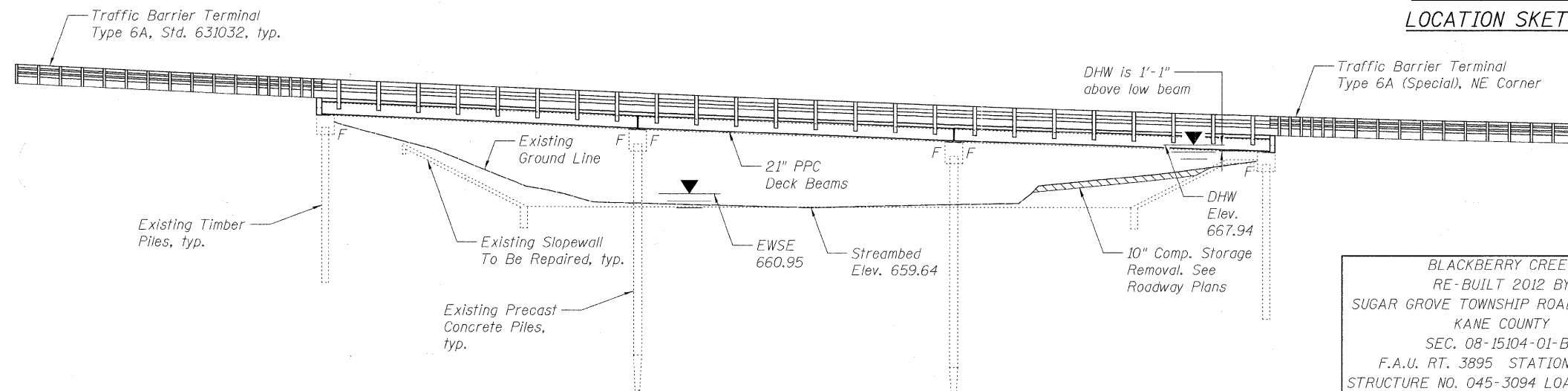
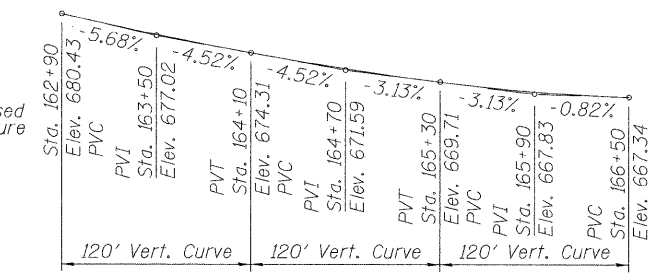
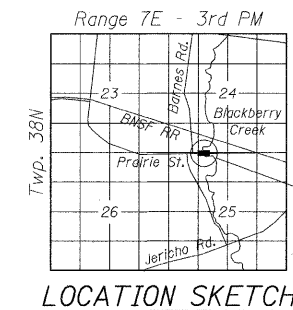


Bench Mark: Disc at South East Abutment Wingwall, Elev. 668.78

Existing Structure: Structure No. 045-3094, Built in 1972 as Section 104B-TR. The existing superstructure consists of 3 spans of 9 PPC Deck Beams with a back-to-back of abutments length of 136'-8", an out-to-out width of 27'-0", an HMA Wearing Surface and Type N Bridge Railing. The existing substructure consists of Bent Abutments on Timber Piles and Bent Piers on Precast Concrete Piles. The existing superstructure is to be removed and replaced with 7 PPC Deck Beams with an out-to-out width of 28'-0", a Concrete Wearing Surface and Type SM Bridge Railing. Traffic will be detoured during construction.

Salvage: No salvage.



BLACKBERRY CREEK
RE-BUILT 2012 BY
SUGAR GROVE TOWNSHIP ROAD DISTRICT
KANE COUNTY
SEC. 08-15104-01-BR
F.A.U. RT. 3895 STATION 164+76
STRUCTURE NO. 045-3094 LOADING HL-93

NAME PLATE

See Std. 515001
Existing Name Plate shall be cleaned and relocated next to new Name Plate. Cost included with Name Plates

LOADING HL-93 (NEW CONST.)
LOADING HS20-44 (EXIST. CONST.)
Allow 25#/sq. ft. for future wearing surface.

DESIGN SPECIFICATIONS

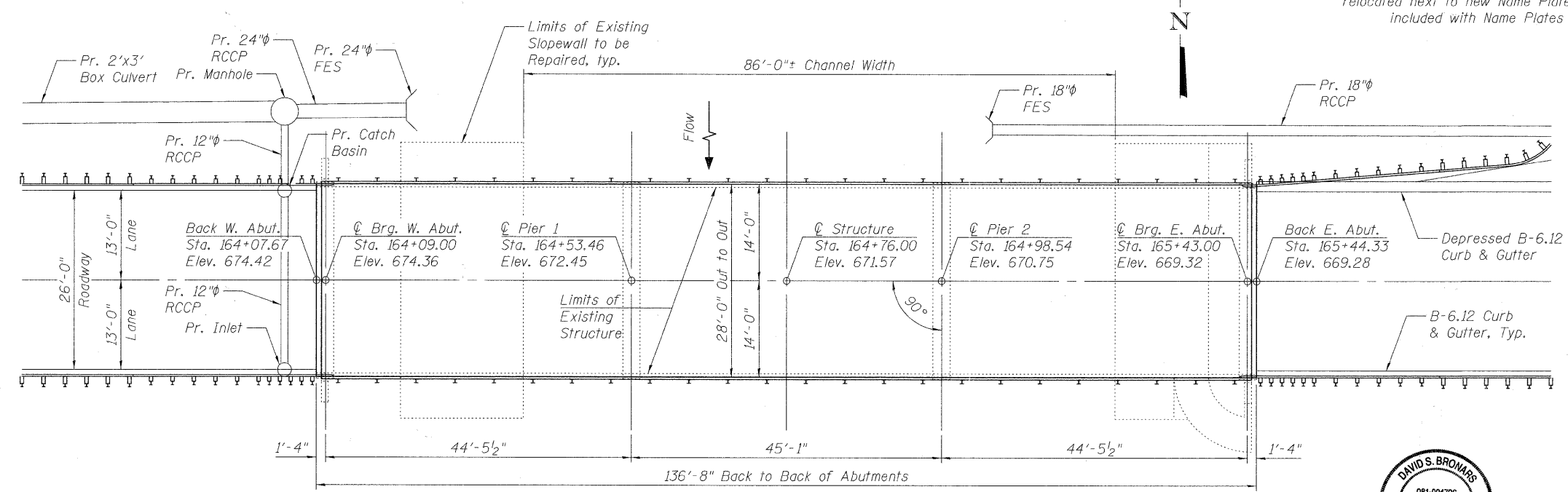
NEW CONSTRUCTION
2010 Interim Revisions to AASHTO LRFD Bridge Design Specifications, 5th Edition
EXISTING CONSTRUCTION
2002 AASHTO Standard Specifications for Highway Bridges

DESIGN STRESSES

FIELD UNITS (NEW CONSTRUCTION)
f'c = 3,500 psi
fy = 36,000 psi
fy = 60,000 psi (Reinforcement)
PRECAST PRESTRESSED UNITS
f'c = 6,000 psi
f'ci = 5,000 psi
fpu = 270,000 psi (1/2" Low Lax Strands)
fpbt = 201,960 psi (1/2" Low Lax Strands)
FIELD UNITS (EXIST. CONSTRUCTION)
f'c = 3,500 psi
fy = 40,000 psi (Reinforcement)

SEISMIC DATA

LRFD - NEW CONSTRUCTION
Seismic Performance Zone (SPZ) = 1
Design Spectral Acceleration at 1.0 sec. (Sp1) = 0.096 g
Design Spectral Acceleration at 0.2 sec. (Sp5) = 0.192 g
Soil Site Class = D
LFD - EXISTING CONSTRUCTION
Seismic Performance Category (SPC) = A
Bedrock Acceleration Coefficient (A) = 0.04
Site Coefficient (S) = 1.0



WATERWAY INFORMATION

Drainage Area = 55.3 Sq. Miles Low Grade Elev. 666.38 @ Sta. 168+48.06

Flood	Freq. Yr.	Q. C.F.S.	Opening Sq. Ft.		Nat. H.W.E.		Head - Ft.		Headwater El.	
			Exist.	Prop.	Exist.	Prop.	Exist.	Prop.	Exist.	Prop.
Design	10	1,496	640.15	640.15	667.15	0.03	0.03	667.18	667.18	
Base	30	2,109	707.53	707.53	667.88	0.06	0.06	667.94	667.94	
Overtopping	100	2,952	772.15	772.15	668.78	0.10	0.10	668.88	668.88	
Max. Calc.	2.8	801	550.45	550.45	666.01	0.37	0.37	666.38	666.38	
	500	4,287	853.13	853.13	670.09	0.10	0.10	670.19	670.19	

10 Year Velocity Through Existing Bridge = 2 ft/s
10 Year Velocity Through Proposed Bridge = 2 ft/s

PLAN

DESIGN SCOUR ELEVATION TABLE

Design Scour Elevation (ft.)	W. Abut.	Pier 1	Pier 2	E. Abut.
	-	653.27	654.33	658.37



David Bronars 12/15/2011
Exp 11/30/2012

I certify that to the best of my knowledge, information and belief, this bridge/box culvert is designed using the loads shown on the plans and consistent with that degree of care and skill ordinarily exercised by members of the same profession. The design is reasonably-priced for the style of structure and complies with requirements of the current AASHTO Standard Specifications for Highway Bridges.

GENERAL PLAN & ELEVATION
PRAIRIE ST. OVER BLACKBERRY CREEK
F.A.U. ROUTE 3895
SECTION 08-15104-01-BR
KANE COUNTY
STATION 164+76.00
STRUCTURE NO. 045-3094

PLOT DATE = 12/15/2011 FILE NAME = X:\113-2245-008 Prairie Street\CAD\S\Sheets\IP_Plotter - Prairie 81 - General Plan Elevation.dgn USER NAME = mst-utl



DESIGNED - LM	REVISD -
CHECKED - GC	REVISD -
DRAWN - LM	REVISD -
CHECKED - DSB	REVISD -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

GENERAL PLAN & ELEVATION
STRUCTURE NO. 045-3094
SHEET NO. 1 OF 17 SHEETS

F.A.U. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
3895	08-15104-01-BR	KANE	38	14

CONTRACT NO. 63661
ILLINOIS FED. AID PROJECT